

HALOPHYTES IN THE NEW BRUNSWICK SALT SPRINGS.

<i>Agrostis alba</i> var. <i>maritima</i> (Lam.) Mey.	<i>Juncus bufonius</i> var. <i>halophilus</i> Buchenau & Fernald.
<i>Distichlis spicata</i> Greene	<i>Atriplex patula</i> L.
<i>Puccinellia paupercula</i> var. <i>alaska-</i> <i>kana</i> Fernald & Weatherby	<i>Salicornia europaea</i> L.
	<i>Ranunculus Cymbalaria</i> Pursh.
	<i>Spergularia salina</i> J. & C. Presl.

The New Brunswick salt springs support *Distichlis spicata* and *Puccinellia paupercula* var. *alaskana*, neither of which is reported from western New York. A striking contrast appears in the Champlain region in regard to the presence of halophytes, for with the exception of *Atriplex patula*, not uncommon inland as a weed, no true halophytes are found about Lake Champlain. All three regions were probably equally submerged by the Champlain Sea, but in New York and New Brunswick, the halophytes occur in the neighborhood of saline deposits. One therefore comes directly to the conclusion that salt deposited by the Post-Pleistocene marine invasion alone does not support the growth of true halophytes in eastern North America.

(To be continued.)

SOME VARIETIES OF ARTEMISIA BOREALIS.

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ARTEMISIA BOREALIS Pall., var. **latisecta**, n. var., a var. typica recedit foliis rosulatis crassioribus, segmentis oblongis vel oblanceolatis saepe 3-4 mm. latis.—Newfoundland, Labrador and eastern Quebec. NEWFOUNDLAND: talus of trap sea-cliffs, French (or Tweed) Island, Bay of Islands, September 2, 1926, *Fernald, Long & Fogg*, no. 476 (TYPE in Gray Herb.). LABRADOR: Rama, August 20-24, 1897, *Sornborger*, no. 62, in part. QUEBEC: Southwest Point, Anticosti Island, August, 1861, *Hyatt, Shaler & Verrill*.

In typical *Artemisia borealis* and in var. *Purshii* Besser the rosette-leaves are much more finely divided, the linear to narrowly oblanceolate divisions being mostly 0.5-1.5 (rarely 2) mm. wide. Var. *latisecta* has the nearly glabrous involucre of typical *A. borealis* rather than the densely villous involucre of var. *Purshii* Bess. in Hook. Fl. Bor.-Am. i. 326 (1834).

Artemisia borealis, a *Purshii*, like many other species and varieties published by Besser, had a very confused christening. This arose through the fact that Besser, who was preparing a monograph of the genus, had the good-natured but unfortunate habit of putting out many of his new propositions in a sort of tentative way in the works of other authors and too often with descriptions or synonymy quite unlike those finally published by him. When he *first* published *A. borealis*, a *Purshii* he described a characteristic plant from Labrador, arctic America and the Rocky Mts. (now also known in Greenland, Newfoundland and eastern Quebec) with villous involucres: "sericea, cinerea; . . . periclinii squamae villosae"; but he appended the citation of the glabrous-headed *A. spithamea* Pursh, a fact which has led some later authors to infer that the name *A. borealis*, a *Purshii* was merely a nomenclatorial substitute for *A. spithamea*. Besser's original treatment, however, suggests that he knew that he was dealing with two quite distinct plants: 1st, *A. borealis*, a *Purshii*, a cinereous-silky plant with villous involucres; 2d, "*A. spithamea*. Pursh, *Fl. Am. v. 2*, p. 522; folia prioris glaberrima: . . . periclinii squamae glabrae." Certainly these two extremes occur on the Labrador coast, whence Pursh had his original material, and his description of *A. spithamea* (1814) indicates that Pursh, as Besser stated, had the plant with glabrous involucres: "calycibus scariosis." These were just the words used by Pursh in describing the glabrous involucre of *A. canadensis* Michx.; but when he had a species with pubescent involucres he definitely so described it: for example, *A. vulgaris* L. "calycibus tomentosis."

In a publication one year later than his original description of *Artemisia borealis*, a *Purshii*, Besser repeated¹ his diagnosis of the plant with villous involucres and unequivocally cited *A. spithamea* as a synonym. He appended, however, diagnoses of several noteworthy forms, indicated by letters, and only under these minor forms did he include plants with glabrous involucres. *A. spithamea*, then, was considered by him as belonging to *A. borealis*, a *Purshii*, in its inclusive sense, but his diagnosis of the variety was based on something else; and still later, in DeCandolle's *Prodromus*, Besser held tenaciously to the characterization of var. *Purshii* "capitulis extus villosis."²

¹ Besser, *Dracunculi seu de sectione IV^{ta} et ultima Artemisiarum Linnaei*. Mosc. Soc. Nat. Bull. viii. 80 (1835).

² Bess. in DC. *Prodr.* vi. 99 (1837).

Besser's treatments were certainly perplexing and Torrey & Gray thought to clarify¹ them, by giving a brand new but unnecessary name to the plant with villous heads: *Artemisia borealis*, " β Besseri . . . *A. borealis*, α Purshii, Bess. . . . excl. syn. Pursh"; while they correctly treated *A. spithamea* as a separate variety: " δ *spithamea*: . . . at length glabrous . . . *A. spithamea*, Pursh! fl. 2, p. 522. (At length glabrous throughout; . . .)" Very recently Hall and Clements, merging *A. borealis* with *A. campestris* L., coined the combination *A. campestris*, subsp. *spithamea* (Pursh) Hall & Clements² for the plant with "Involucre densely villous"; but from the facts above stated it should be clear that *Artemisia spithamea* Pursh was a plant with heads glabrous or essentially so, while the unfortunately named *A. borealis*, α *Purshii* Bess. was repeatedly described by Besser as the plant with villous involucre.

GRAY HERBARIUM.

RAYLESS ASTER MULTIFLORUS.—In the first part of October of this year (1926), while walking through a sandy field here in Groton, I noticed, among the thousands of individuals of *Aster multiflorus* that covered the field, a patch of plants that looked peculiar to me, and upon closer examination I discovered the total absence of ray-flowers in them. Otherwise they had the characters of typical *Aster multiflorus*. There were five or six plants in the colony.

I understand that this is the first mention of this *Aster* without ray-flowers. Specimens are to be deposited in the herbarium of the Connecticut Botanical Society.—K. P. JANSSON, Groton, Conn.

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¹ T. & G., Fl. ii. 417 (1843).

² Hall & Clements, Phylog. Meth. in Taxon. 123 (1923).

³ CARGOES AND HARVESTS by Donald Culross Peattie. 311 pp. New York and London. D. Appleton & Co. 1926. \$2.50.